rangement, the motor **162** can serve as the sole drive motor for the tray rotating the latter upon operation of the random selection system and also rotating the tray when the normal tray-indexing or advance mechanism is used.

It will be understood the present invention permits the control unit **10** to be remotely disposed with respect to the projector and connected thereto by a cable having a minimum number of conductors. In the embodiment according to the present invention, only eight conductors are contained within the extension cable **15** and therefore a standard eight-conductor cable can be used. This important feature results from the nature of the stepping motor with its remote commutator which requires, in the embodiment shown, only three wires for connecting the commutator to the rotor. The unique stepping motor with this remote commutator maintains precise synchronization between rotation of the slide tray and the seeking contacts for precisely locating any randomly selected slide space at the slide projection gate of the projector.

I claim:

1. A remotely operated random selection system for a slide projector of the type having a slide tray and motor-driven indexing means therefor, said system comprising:

a. a control unit separate and remote from said projector comprising a motor, a seeking contact driven in an arcuate path by said motor, contact means defined by two separate segments arranged in an arcuate path for alternate engagement by said seeking contact, and manually operable selection means associated with said contact means for establishing the extent of movement of said seeking contact to effect a predetermined circuit condition;

b. a commutator mounted on said projector and having the rotatable component thereof driven by said motor-driven indexing means;

c. said motor-driven indexing means including a reversible motor;

d. a cable between said control unit and said projector electrically connecting the motor and the commutator to cause rotation of the former in synchronization with the rotation of the rotatable component of the latter; and

e. circuit means connecting the seeking contact and the segments of said contact means with the reversible motor for establishing either forward or reverse signals for each selected circuit condition, depending on which of said segments is engaged by said seeking contact to alternately energize the reversible motor in forward and reverse directions.

2. Random slide selection means for a slide projector of the type having a slide tray with a plurality of slide-receiving spaces therein, said means comprising:

a. drive means including a drive motor for indexing the slide tray;

b. a DC stepping motor having a remote commutator, which commutator includes a rotary element driven by said drive means;

c. a seeking contact driven in an arcuate path by the rotor of said stepping motor;

d. nonconductive support means mounting an arcuate contact strip arranged to be wiped by said seeking contact and defining a dielectric area adjacent one end of said strip;

e. control means for selecting a number corresponding to the selected space in the tray, including means for positioning said contact strip with respect to said seeking contact to establish an initial spatial relationship between the former and the latter; and

f. circuit means including the drive motor, the seeking contact and the contact strip for establishing a first contact condition when said seeking contact wipes said strip and a second circuit condition when said seeking contact reaches said dielectric area, said first circuit condition causing the drive motor to be energized and said second circuit condition causing the drive motor to be deenergized.

3. The random slide selection means according to claim **2** further defined by:

a. another arcuate contact strip on said support means and having one end thereof adjacent said dielectric area and adapted to be wiped by said seeking contact alternately with said first-mentioned contact strip;

b. said circuit means including rectifying means providing said first strip with positive and said another strip with negative DC voltage;

c. said drive motor being of the reversible type; and

d. said circuit means also including said another strip for alternately energizing said drive motor in forward and reverse directions depending on whether said first strip or said second strip is being wiped by said seeking contact.

4. The random slide selection means according to claim **2** further defined by:

a. another seeking contact arranged for wiping engagement with said contact strip;

b. means for driving said another seeking contact from said rotor at a different angular rate from the rate of angular movement of the first-mentioned seeking contact; and

c. selector means for alternately placing said seeking contacts in said circuit means whereby said random slide selection means may accommodate another slide tray having a number of slide-receiving spaces different from the number of slide-receiving spaces in the first mentioned tray.

5. In a slide projector of the type having a projection gate and a slide tray including a plurality of slide-receiving spaces, a system for presenting at said gate any one of said spaces selected at random comprising:

a. a drive motor and means driven thereby for alternately indexing the tray in forward and reverse directions;

b. a commutator-transmitter including a rotatable element and means for mechanically rotating the latter by said drive motor in synchronization with the indexing movement of said tray;

c. motor means remotely associated with said commutator-transmitter and including a rotor which is rotated in synchronization with said rotatable element in response to signals generated by the commutator-transmitter as a result of rotation of the rotatable element;

d. a seeking contact and means connecting the same with said rotor for being driven in an arcuate path thereby;

e. selector contact means having support means mounting first and second contact strips with adjacent ends thereof in spaced relation and defining a dielectric area therebetween, said contact strips being arranged in an arcuate path for wiping engagement by said seeking contact;

f. slide selection means associated with said selector contact means and operable to establish the extent of movement of said seeking contact which is necessary to effect a first contact condition, a second contact condition being effected during movement of said seeking contact; and

g. circuit means connected to said drive motor, said seeking contact and said selector contact means and adapted to cause deenergization and energization of said drive motor upon the occurrence of said first and second contact conditions, respectively, said circuit means including rectifying means providing said first and second strips with positive and negative DC voltage, respectively, during the occurrence of the second contact condition to alternately rotate the drive motor in forward and reverse directions depending on whether said first or second strip is being wiped by said seeking contact.

6. In a slide projector of the type having a projection gate and a slide tray with a plurality of slide-receiving spaces therein, a system for presenting at said gate any one of said spaces selected at random comprising:

a. a drive motor and means driven thereby for alternately indexing the tray in forward or reverse directions;

b. a three-bar commutator-transmitter including a rotatable element;